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RSPA-99-6283-8

Dockets Management System
The Records Center, Room 8421
U.S. Department of Transportation
The Nassif Building
400 Seventh Street, S.W.
Washington, DC 20590-0001

Subject: Docket No. RSPA–99–6283 (HM–230), Hazardous Materials Regulations (HMR); Compatibility With the Regulations of the International Atomic Energy Agency (IAEA)

Ladies and Gentlemen:

The Air Line Pilots Association (ALPA), representing the safety interests of 55,000 professional airline pilots flying for 51 airlines in the United States and Canada, has reviewed the subject Research and Special Programs Administration (RSPA) Advanced Notice of Proposed Rulemaking (ANPRM) which is considering issuing a notice of proposed rulemaking (NPRM) proposing to amend requirements in the HMR pertaining to the transportation of radioactive materials based on recent changes contained in the International Atomic Energy Agency (IAEA) publication, entitled "IAEA Safety Standards Series: Regulations for the Safe Transport of Radioactive Material, 1996 Edition, Requirements, No. ST-l" (hereafter referred to as ST-l).

We understand that the purpose of this rulemaking initiative is to harmonize requirements of the HMR with international standards for hazardous materials. We also understand that comments are requested concerning the scope of the ANPRM, i.e., extent to which differences between the HMR and the IAEA publication ST-l should be considered in proposing changes to the HMR. .

ALPA applauds RSPA for the initiative to harmonize the HMR with the world standard ST-1 as developed by the IAEA and adopted by the ICAO Dangerous Goods Panel (DGP) for the 2001-2002 edition of the ICAO Technical Instructions (ICAO *T.I.*)

However, there are potential problems in doing this at the present time. ST-l has been in existence for a year now and several states are already trying to use it

despite the lack of any explanatory supporting text (ST-2). Problems have been identified by a TRANSAC technical committee of the IAEA with contamination limits for used containers, legal interpretation of the regulations, explanatory material, emergency response guidance, consumer goods containing radioactive material and Type C packaging (airborne) fissile packaging criticality issues. There is presently ongoing work at the IAEA to resolve these issues and some. resolution is anticipated prior to the TRANSAC meeting in Vienna in May 2000.

ST-2 (the explanatory text for ST-l) is only in the initial draft at this time. This text is necessary to properly implement ST-l.

The problems with "Consumer Products" involve the "new definition" of radioactive material resulting in a varying point at which the regulations apply, depending on the substance. The limits for Krypton are quite low, in fact so low that all consignments of 10 or more "compact fluorescent lights" are technically radioactive material and must comply with all the appropriate regulations on labeling, handling and packaging. Similar problems exist with welding rods, gas mantles, glass camera lenses, ceramic glazes, aircraft parts containing Thorium, plus many others as listed in NUREG 1717. There is no great danger to the public here, but the regulations as published are being broken with the full knowledge of the authorities of many states. This situation will have to be resolved by TRANSAC.

Type C containers (which are still under development) are designed to carry reprocessed nuclear fuel known as MOX. The testing criteria for these containers is still under a continual review at the IAEA. In the US, we are regulated in the carriage of fissile material by NUREG 0360 (as we understand, is a Congressional mandate) which in part states that any container carrying fissile material in civil aviation must be able to withstand an impact speed of 250 knots or 295 mph. The present test criteria for Type C is approximately half that speed. We also question the specifics of the fire test for Type C as approved in ST-l, that involve both duration and temperature as well as the sequencing of the tests and on the number of individual packages tested. We feel that both the duration and temperature are unrealistically low and the sequence is not adequate.

The new concept of Low Dispersible Material (LDM) was introduced to offset the problems encountered in developing a Type C package. The nuclear industry will obviously attempt certification of MOX as LDM. This will require the material to undergo the Type C tests not packaged and only disperse 100 times the normal! release fraction. It may then be shipped in 'any type container, even Type A. The TRANSAC technical committee discussed the possibility of an array of these packages going critical, causing a large gamma ray pulse, resulting in doses of 100 mSv at approximately 200 meters. This again will have to undergo future consideration at TRANSAC.

ALPA believes there are significant safety implications regarding the movement of these substances via the air mode as specified by ST-l and very strongly recommends that the actions mentioned in this ANPRM, specifically the areas we have noted above, should be delayed and/or postponed until such time as the questionable contents in ST-l are resolved by the IAEA, the ICAO Dangerous Goods Panel and until ST-2 is finalized and released.

If you would like to discuss this matter further and in greater detail than this document allows, please contact me, via Mr. Rick Kessel, ALPA staff, at 703/689-4202. Thank you for the opportunity to comment.

Sincerely,

George E Sprenkle

Captain George E. Sprenkle, Director /esk
Dangerous Goods Programs

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